VAISALA

QUOTATION

Boulder Operations
P.O. Box 3659
Boulder, CO 80307-3659, USA
Phone 303 499 1701
Fax 303 499 1767

Contact:	KANSAS DEPARTMENT OF TRANSPORTATION	**Date:**	5/2/2011
Customer:	RWIS CONTRACT PRICING - YEAR 2011	**Quote No:**	
Address:	TROY WHITWORTH - POINT OF CONTACT	**Description:**	
Email/Fax:		**Lead Time:**	
Phone:			

VAISALA pricing is in U.S. Dollars. Does not include shipping charges which are invoiced at cost after shipment.

QUOTATION VALID FOR 90 DAYS

Qty.	Item Description	Part #	Unit Price	KDOT Discounted Price
	WEATHER STATION ELECTRONICS			
1	**Vaisala SSI RWS - RWS110 (110VAC)** Includes full size card rack, interface cards, system boards, station software License, RPU back plate and NEMA4 aluminum RPU enclosure. (2 serial ports are standard)	70130200	8023.00	6,819.55
	OPTIONS FOR WEATHER STATION ELECTRONICS			
1	**Vaisala SSI RWS Upgrade for Standard Size Enclosure, 30x24x12 (110VAC)** Includes full size card rack, interface cards, system boards, station software License, and RPU back plate. For installation in existing RPU enclosure. (2 serial ports are standard) *QUANTITY UPGRADE PRICING:* UNITS: 6 - 15: $6,107.97 UNITS: 16 - 25: $5,887.20 UNITS: 26 - 40: $5,519.25 UNITS: 41+ $5,372.07	70030200	7358.97	6,255.12
1	**Vaisala SSI RWS Serial Port Expansion Kit - Adds 2 Serial Ports**	70120050	300.00	255.00
1	**Vaisala SSI RWS 2 Surface Sensor Expansion Kit - Adds 2 Sensors** RWIS elite hardware & software to support addition of 2 surface sensors	70120043	800.00	680.00
1	**Vaisala SSI RWS 4 Surface Sensor Expansion Kit - Adds 4 Sensors** RWIS elite hardware & software to support addition of 4 surface sensors	1400	1400.00	1,190.00
1	**RPU Strip Heater with Thermostat**	56023126	350.00	297.50
1	**Industrial Ethernet Real-Time 5-Port Switch** Used to hook multiple Ethernet devices to the LX-RPU platforms	51018117	474.05	402.95
	PROJECT ITEMS FOR WEATHER STATION ELECTRONICS			

Qty.	Item Description	Part #	Unit Price	Discounted Price
1	**Project Item, LX-RPU, RPU Relay Control Board** Relay card with software license, includes digital and analog outputs, works with RWIS elite and ESP RPUs.	70216122	602.89	512.46
1	**Project Items, LX-RPU, Remote Relay Kit** Wireless ethernet radio package that resides at remote device such as sign, flashing beacon, etc. Package contains radio, antenna, cables, enclsoure. Either Master Remote Panel Control Kit or Standalone Master Control Kt resided at the RPU location.	72681000	8924.74	7,586.03
1	**Project Item, LX-RPU, Master Remote Panel Control Kit** Wireless ethernet radio package that resides at at the RPU. Kit includes radio, antenna, cables, no enclosure. Used in conjuction with Remote Relay Kit.	72681250	8502.47	7,227.10
1	**Project Item, LX-RPU, Standalone Master Control Kit** Wireless ethernet radio package that resides at at the RPU. Kit includes radio, antenna, cables, enclosure. Used in conjuction with Remote Relay Kit.	72681200	10108.18	8,591.96
1	**Project Item, LX-RPU, Remote Flasher Package- Slave Site** Wireless ethernet radio package that resides at at the RPU. Kit includes radio, antenna, cables, no enclosure. Used in conjuction with Remote Relay Kit. Wireless ethernet radio package that resides at at the RPU. Kit includes radio, antenna, cables, enclosure. Used in conjuction with Remote Relay Kit.	72681100	1109.51	943.08
1	**Multi-Mode Fiber to Ethernet Remote Installation Kit** 4-Port Ethernet switch w/multi-mode fiber support, Dual port Ethernet surge and lightening protection Cable, Cat5 Ethernet cable, 1ft Enclosure, 20" x 16" x 10, Aluminum Enclosure mounting bars	76706100 52010522 49030220 50500155 15020018 60030018	3338.74	2,837.93

MOUNTING STRUCTURES FOR WEATHER STATION ELECTRONICS

Qty.	Item Description	Part #	Unit Price	Discounted Price
1	**Roadway Fold-Over 30' Tower Kit - MF1330**	60083030	3640.85	3,094.72
1	24" Cross member mounting bracket Tower top sectionTower fold-over assembly Tower bottom section Tower middle section Fixed base assembly for concrete foundation 2 center tower mounts Anti-climb panels Atmospheric mounting pole			
1	Padlock	25010001	19.50	16.58
1	Tower grounding kit, RPU	24051114	277.82	236.15
1	**Roadway Tower Relocation Kit**	24051012	594.65	505.45
	Fixed base assembly for concrete foundation	60010004	272.76	231.85
1	Tower grounding kit, RPU	24051114	277.82	236.15

ATMOSPHERIC & ENVIRONMENTAL SENSING DEVICES

Qty.	Item Description	Part #	Unit Price	Discounted Price
	Air Temp / Humidity Sensors			
1	HMP155 w/ Connection Cable 3.5m 8-pin M12	HMP155 E1AA11A0A1A1A0A	1273.00	1,082.05
1	HMP155 LX-RPU NA Accessory Kit	76903000		
1	Radiation Shield	DTR503A	460.00	391.00
1	**Rain Detector (RAIN ON/OFF)**	DRD11A	2150.00	1,827.50

Qty.	Item Description	Part #	Unit Price	Discounted Price
1	DRD11A LX-RPU NA Accessory kit	76905000		
	Precipitation / Visibility Sensors			
1	**PWD12, Precipitation / Visibility Sensor, 10-2000m**	**PWD CNNNN1NANNNNBN**	7480.64	**6,358.54**
1	**PWD Connection Cable 3.85m (16 wires)**	**217150**	261.60	**222.36**
1	**Installation Kit for PWD10/12/20/22**	**76800000**	202.87	**172.44**
	Wind Sensors			
1	**Wind Sensor Kit**	**WM30B2CB**	1430.00	**1,215.50**
	Mechanical Wind Sensor	WMS301		
	Mounting Accessories Kit for WMS301and 50mm-110mm Mast	WMS30KIT		
	Cable, 10 m	19904		
1	**WMS301 LX-RPU NA Accessory Kit**	**76902000**		
1	**Wind Sensor**	**WMS301**	1238.24	**1,052.50**
	Mechanical Wind Sensor			
1	**Ultrasonic Wind Sensor Kit, Standard, Heated**	**WMT700 2B2A0A003B1A2**	3190.00	**2,711.50**
	Ultrasonic Wind Sensor, Heated Transducers, 65m/s, -40...+60C	WMT702		
	Mounting Accessories Kit for WMT70	WMT70FIX		
	Cable, 10 m	WMT70CABLE2		
1	**WMT702 LX-RPU NA Accessory Kit (Heated Version)**	**76906000**	333.44	**283.42**
	Pressure Sensor	**PTB1101A0AB**	1050.00	**892.50**
	BAROCAP® silicon capacitive absolute pressure sensor Range: 500-1100 hPa Total accuracy (-20 ... +45 °C): ±1.00 hPa 0..5 Vdc Standard Installation			
1	**PTB110 LX-RPU NA Accessory Kit**	**76904000**		
1	**PTZ Color Camera Kit**	**56218580**	6504.75	**5,529.04**
	Includes ethernet network video camera, dome enclosure, mounting, 30ft cables, 24 VAC transformer, surge and lighting protection			
1	**Fixed Color Camera Kit**	**56218560**	4550.00	
1	**Streaming Video Communication Kit**	**59030315**	4189.50	**3,561.08**
	Includes Raven-X CDMA modem/router, ethernet switch, cables, antenna, antenna mount bracket polyphaser, and DC wall plug in power source			
1	**Fixed Color Camera Kit - Low Powered**	**56218575**	3274.92	**2,783.68**
	Includes ethernet network camera and enclosure for solar power camera applications with lens heater			

MOUNTING STRUCTURES FOR SENSORS

Qty.	Item Description	Part #	Unit Price	Discounted Price
1	**Sensor Mount Kit, Lattice Tower**	**228699**	188.92	**160.58**
	Sensor Support Arm 1.2m	212564		
	Mounting Assembly, Lattice Mount	XARMMOUNT		
1	**Sensor Mounting Hardware Kit, Pole**	**DRUNIVARM**	775.00	**658.75**
	Sensor Support Arm 1.2m	212564		
	Mounting Bracket for Pole Installation	DRW232183		
	Fixing Plate for Sensor Arm	212489		
	Perforated Band 518R/20	226952		
	Screw lock 540R/18+	226953		
	Plastic Bag Minigrip 100x100	0970		
	Washer, Spring Lock B6 DIN127 A4	4340		
	Screw. Hex Socket Head M6x16 DIN912 A4	4477		
	Sensor Mounting Hardware Components			
1	**Sensor Support Arm 46"**	**212564**	185.00	**157.25**
1	**Mounting Assembly, Lattice Mount**	**XARMMOUNT**	103.90	**88.32**
1	**Mounting Assembly, Pole Mount**	**DRUNIV**	596.40	**506.94**
1	**Fixing Plate**	**212489**	59.00	**50.15**

Qty.	Item Description	Part #	Unit Price	Discounted Price
	PAVEMENT SENSORS			
1	**Non-Invasive Surface State Sensor**	**DSC111**	**16320.00**	**13,872.00**
1	DSC111 Aiming tool kit	DRC111KIT	650.00	552.50
1	**Non-Invasive Surface Temperature Sensor (RS485)**	**DST111**	**5350.00**	**4,547.50**
	Sensor arm and universal mounting kit for 80-600mm poles	DRUNIVARM		
	Surge protector	WSP150		
	Remote Serial Hardware Interface Kit	76706000		
	10 Meter Cable for Power and Communications	216546		
	Cable Gland, PG16	227437		
	Nut, Cable Gland, PG16	227442		
	RS485 Biasing Resistor Block	50001200		
	Female Disconnect, Insulated, 22-18 AWG	18600201		
	Male Disconnect, Insulated, 22-18 AWG	18600200		
	28Vdc Power Supply Kit	56023500		
	DSC111/DST111 Installation Manual (North Americal)	00000050		
1	**Lattice Tower Installation Kit for Non-Invasive Sensors**	**76900000**	**645.00**	**548.25**
	Crossarm, 1.2 Meter	212564		
	Mount for Lattice Tower (part of XARMMOUNT)	XARMMOUNT		
	28Vdc Power Supply Kit	56023500		
	10 Meter Cable for Power and Communications	216546		
	Strain Relief, PG13.5, Black, W/Locking Nut	11130202		
	RS485 Biasing Resistor Block	50001200		
	Female Disconnect, Insulated, 22-18 AWG	18600201		
	Male Disconnect, Insulated, 22-18 AWG	18600200		
	DSC111/DST111 Installation Manual (North Americal)	00000050		
	Sensor Cables			
1	**Communication cable between DSC111 and DST111**	**216548**	**90.00**	**38.25**
1	**10 m cable for communications and power supply**	**216546**	**122.08**	**103.77**
1	**Remote Serial Hardware Interface Kit**	**76706000**	**955.04**	**811.78**
1	**Vaisala SSI Passive Pavement Sensor FP2000 150' Grey #3 Kit**	**76420150**	**4460.19**	**3,791.16**
	Includes 150' Type IIA cable, 1-20 oz. encapsulating epoxy, 1-6 oz. topcoat epoxy #3 concrete, 1 Steel Stick			
1	**Vaisala SSI Passive Pavement Sensor FP2000 300' Grey #3 Kit**	**76420300**	**4570.44**	**3,884.87**
	Includes 300' Type IIA cable, 1-20 oz. encapsulating epoxy, 1-6 oz. topcoat epoxy #3 concrete, 1 Steel Stick			
1	**Vaisala SSI Passive Pavement Sensor FP2000 500' Grey #3 Kit**	**76420500**	**4680.69**	**3,978.59**
	Includes 500' Type IIA cable, 1-20 oz. encapsulating epoxy, 1-6 oz. topcoat epoxy #3 concrete, 1 Steel Stick			
1	**Vaisala SSI Passive Pavement Sensor FP2000 150' Black #9 Kit**	**76421150**	**4460.19**	**3,791.16**
	Includes 150' Type IIA cable, 1-20 oz. encapsulating epoxy, 1-6 oz. topcoat epoxy #9 asphalt, 1 Steel Stick			
1	**Vaisala SSI Passive Pavement Sensor FP2000 300' Black #9 Kit**	**76421300**	**4570.44**	**3,884.87**
	Includes 300' Type IIA cable, 1-20 oz. encapsulating epoxy, 1-6 oz. topcoat epoxy #9 asphalt, 1 Steel Stick			
1	**Vaisala SSI Passive Pavement Sensor FP2000 500' Black #9 Kit**	**76421500**	**4680.69**	**3,978.59**
	Includes 500' Type IIA cable, 1-20 oz. encapsulating epoxy, 1-6 oz. topcoat epoxy #9 asphalt, 1 Steel Stick			
1	**Vaisala Subsurface Temperature Probe w/150' D Kit**	**76510155**	**1380.12**	**1,173.10**

Qty.	Item Description	Part #	Unit Price	Discounted Price
	Includes 150' Type IIA cable, 1-20 oz. encapsulating epoxy			
1	**Vaisala Subsurface Temperature Probe w/300' D Kit** Includes 300' Type IIA cable, 1-20 oz. encapsulating epoxy	76510310	1487.22	1,264.14
1	**Vaisala Subsurface Temperature Probe w/500' D Kit** Includes 500' Type IIA cable, 1-20 oz. encapsulating epoxy	76510500	1597.47	1,357.85
1	**Splice Kit**	24051020	79.33	67.43
1	**Splice Tool Kit** Hand presser and swaging tool	24051016	521.30	443.11
1	**Vaisala Nu-Metrics Permanent Traffic Analyzer TCP500-A1A**	TCP500-A1A	1740.00	
1 1 1	**Vaisala Nu-Metrics Permanent Traffic Analyzer TCP500-A2A** WX-900 (Volume Count, Classification, Speed,WX) Includes: Electronic Module, Battery Pack, In-Ground Housing	TCP500-A2A	1909.64	1,623.19
1 1 1	**Vaisala Nu-Metrics Permanent Traffic Analyzer TCP500-B1A** CS-245 (Volume Count, Classification, Speed) Includes: Electronic Module, Battery Pack, In-Ground Housing	TCP500-B1A	1738.60	1,477.81
1 1 1	**Vaisala Nu-Metrics Permanent Traffic Analyzer TCP500-A3A** ETP-900 (Volume Count, Classification, Speed,WX) Includes: Electronic Module, External Pavement & Sub Surface Probe, Battery Pack, In-Ground Housing, Thermistor Probes	TCP500-A3A	1973.74	1,677.68
1 1 1	**Vaisala Nu-Metrics Permanent Traffic Analyzer TCP500-B3A** ETP-2.45 (Volume Count, Classification, Speed, WX-3 temperatures available Includes: Electronic Module, Battery Pack, In-Ground Housing, (2) Thermistor Probes	TCP500-B3A	2021.25	1,718.06
1	**20 oz. Epoxy**	06030101	138.50	117.73
1	**Lid Removal Tool G2\4\8\10**	70000273	152.15	129.33
1	**Canister Install Tool**	21000150	412.00	350.20
1	**Vaisala Nu-Metric Permanent Traffic Analyzer RPU Radio Kit - 900MHZ** Radio base unit with antenna and cabling for use at RPU to communicate with Groundhog(s) Antenna, Omni directional, 4dBd (915) Arrester-lightning 915MHz Cable, LMR195 3', RPSMA-Male to N-Male Coax Cable 35' low loss extension RFMS 915 Antenna mounting bracket for tower	24051850 11000130 28300107 50501340 50932135 7000801 61030002	2894.06	2,459.95
1	**Vaisala SSI Active Pavement Sensor** Active and passive combined pavement sensor with 150' direct burial cable	72640150	6829.99	5,805.49
1	Active Sensor Installation Kit	76640400	654.74	556.53

PROJECT ITEMS FOR PAVEMENT SENSORS

Qty.	Item Description	Part #	Unit Price	Discounted Price
1	**WSP-150 Surge Protector**	WSP150	460.00	
1	**Type V Surface Sensor Extension Cable in Linear Feet** Up to 500 feet shipped via UPS, longer lengths via common carrier	42110002	1.25 Per Foot	1.06

OPTIONAL COMMUNICATION EQUIPMENT

Qty.	Item Description	Part #	Unit Price	Discounted Price
1	**CDMA Modem Kit (Verizon Approved)**	**59030315**	**2190.14**	**1,861.62**
	Raven X CDMA Modem	52101915		
	Antenna, Yagi, 824-896 MHz	61010003		
	Cable, 1/2" foam helix LDF ISO 30'	50932135		
	Cable, 1/4" foam helix	42190003		
	Polyphaser, DC pass protector	49030213		
	Antenna mounting bracket for tower	61030002		
	13.5 Volt DC wall plug-in power source	28010006		
1	**GSM Modem Kit (AT&TT)**	**Project Item**	**2349.17**	**1,996.79**
	Raven-E Edge, Ethernet	52101910		
	Sim Card	52101920		
	DC Power Cord 10'	50200220		
	3' Ethernet Cable (Red)-Crossover	50500165		
	Antenna, Yagi, Multi-Band, 800-1900-2400MHz, 10dBi	61020010		
	Cable, 1/2" Foam Heliaz LDF ISO 30' N-Male to N-Male	42190002		
	Cable, 1/4" Superflex 3' N-Male to TNC-Male	42190003		
	Polyphaser, DC Pass Protector, N-Female to N-Female	49030213		
		61030002		

MOBILE WEATHER SENSORS

Qty.	Item Description	Part #	Unit Price	Discounted Price
1	**Vaisala Surface Patrol Pavement Temperature Sensor w/Display DSP110**	**73000200**	**1447.04**	**1,229.98**
	Product includes Probe, Dashboard Display, Air Temp Sensor w/cable, and conexal RJ14 cable between probe/display			
1	**Vaisala Surface Patrol Pavement Temperature Sensor Digital DSP111**	**73000350**	**1678.56**	**1,426.78**
	Product includes Probe, Dashboard Display, Air Temp Sensor w/cable, conexal RJ 14 cable between probe/display, and digital daughter board			
1	**Vaisala Surface Patrol Pavement Temperature Sensor Analog DSP112**	**73000650**	**1678.56**	**1,426.78**
	Product includes Probe, Dashboard Display, Air Temp Sensor w/cable, conexal RJ14 cable between probe/display, and analog daughter board			
1	**Vaisala Surface Patrol Pavement Temperature Sensor Spreader DSP113**	**73000600**	**1447.04**	**1,229.98**
	Product includes Probe, spreader interface, Air Temp Sensor w/cable, and cable between probe and customer display			
1	**Vaisala Surface Patrol Pavement Temperature Sensor Spreader FA DSP114**	**73000500**	**1447.04**	**1,229.98**
	Product includes Probe, spreader interface, Air Temp Sensor w/cable, and cable between probe customer supplied display			
1	**Vaisala Surface Patrol HD Pavement Temp / Hum Sensor w/Display DSP210**	**73000250**	**2425.50**	**2,061.68**
	Product includes Probe, HD Sensor, Dashboard Display, and conexal RJ14 cable between probe/display			
1	**Vaisala Surface Patrol HD Pavement Temp / Hum Sensor Digital DSP211**	**73000400**	**2646.00**	**2,249.10**
	Product includes Probe, HD Sensor, Dashboard Display, Air Temp Sensor w/cable, conexal RJ14 cable between probe/display, and digital daughter board			
1	**Vaisala Surface Patrol HD Pavement Temp / Hum Sensor Retrofit DSP212**	**73000550**	**1450.00**	**1,232.50**
	Product includes Probe, HD Sensor, Dashboard Display, and conexal RJ14 cable between probe/display			
1	**Vaisala Surface Patrol HD Pavement Temp / Hum Sensor Spreader DSP213**	**73000000**	**2700.00**	**2,295.00**
	Product includes Probe, HD Sensor, spreader interface, w/cable, and cable between probe/ customer provided display			
1	**Vaisala Surface Patrol HD Pavement Temp / Hum Sensor Spreader FA DSP214**	**73000100**	**2700.00**	**2,295.00**
	Product includes Probe, HD Sensor, spreader interface, w/cable, and cable between probe/ customer provided display			

Qty.	Item Description	Part #	Unit Price	Discounted Price

INSTALLATION SERVICES

| 1 | **On-Site Equipment Installation** | **INSTDAY** | **1500.00** | **1,500.00** |

Installation by Vaisala personnel. Includes equipment installation, calibration, configuration and start-up.
Travel costs except airfare are included; airfare billed at cost.

SERVICE / PREVENTATIVE MAINTENANCE CONTRACTS & ENGINEERING

| 1 | **Commissioning / Site Acceptance** | **SAT** | **1500.00** | **1,500.00** |

Commissioning is performed by Vaisala Field Service Engineer on site after installation has been completed. It is the process that brings the installed RWIS equipment into a fully operational condition. If performed as a separate service, the Field Engineer will calibrate and terminate the pavement sensor cables. The completion of commissioning signifies the start of warranty period.
Travel costs except airfare are included: airfare billed at cost.

MANUALS

| 1 | **LX Technical Manual** | **00000005** | **300.00** | **300.00** |

Includes one printed copy and on copy on CD